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COMMONWEALTH INSTITUTE OF HELMINTHOLOGY

RUFFER, M. A., 1910. Note on the presence of 'Bilharzia haematobia' in Egyptian mummies of the Twentieth Dynasty. *British Medical Journal*, 1, 16.

Examination of the kidneys of six 3,000-year-old mummies in Egypt revealed the presence of calcified *Schistosoma haematobium* ova in two of them.

VOIGT, E., 1938. [A fossil hairworm (*Gordius tenuifibrosus* n.sp.) from the Eocene Geiseltales brown coal.] Ein fossiler Saitenwurm (Gordius tenuifibrosus n.sp.) aus der eozanen Braunkohle Geiseltales. *Nova Acta Leopoldina*, 5 (31), 351-360. [De]

3 SZIDAT, L., 1944. [On the preservation of helminth eggs in pre- and early historical bog corpses.] Über die Erhaltungsfähigkeit von Helmintheneiern in Vor- und Frühgeschichtlichen. *Zeitschrift fur Parasitenkunde*, 13 (3), 265-274. [De]

The intestines of two very well preserved bodies, The Dröbnitz Girl (600 B.C.) and the Karwinden Man (500 A.D.) from moorland in East Prussia (Polish Lakeland) were examined for parasites. In both cases eggs of *Ascaris lumbricoides* and *Trichuris trichiura* were found. The man's intestine also contained mite eggs, a plant nematode (possibly *Anguilla terrestris)* and less well preserved objects which resembled eggs of the fish tapeworm, *Bothriocephalus latus*. The helminth eggs from the girl were virtually indistinguishable from eggs from modern infections and the proportions of the two worm species correspond to the proportions found in the present (1939) rural population of East Prussia.

4 VAN CLEAVE, H. J. & ROSS, J. A., 1947. A method for reclaiming dried zoological specimens. *Science*, 105, 318.

Details of procedures using trisodium phosphate to reconstitute dried animal material are given. These have been widely applied to the recovery of helminth eggs from coprolitic material.

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DUBININ, V. B., 1948. [The occurrence of Anoplura and nematodes in the carcasses of fossil sousliks at Indigirsk.] *Dokl. Akad. Nauk. SSSR*, 62 (3), 417-420. [Ru]

The mummified bodies of three sousliks (*Citellus*) found buried (12.5 metres) in permafrost of Quaternary deposits (10 to 12 thousand years old) in a valley in the Cherskiy Mountains, Yakutia, USSR, were examined. Nematodes found in the appendix of one animal and identified as *Syphacia* resembled *S. obvelata*. Anoplurid lice were also found.

PIZZI, T. & SCHENONE, H., 1954. [The finding of *Trichuris trichiura* eggs in the intestinal contents of an Inca body.] Hallazgo de huevos de *Trichuris trichiura* en contenido intestinal de un cuerpo arqueologico incaico. *Boletin Chileno de Parasitologia*, 9 (3), 73-75.

The body of a child of 8 or 9 years was recovered from the frozen mountain subsoil 17, 658 ft. above Santiago, Chile, and the faeces removed from the rectum and examined for parasites. The burial was dated at about 1500 A.D. Large numbers of well preserved *Trichuris trichiura* ova were found as well as cyst-like objects possibly of *Entamoeba coli*. The absence of *Ascaris* is noted and it is suggested that this finding of *T. trichiura* in what seems to be a pre-Spanish Conquest context, indicates that this nematode existed in South America in prehistoric times and was subsequently transmitted to the Old World.

7 CALLEN, E. O. & CAMERON, T. W. M., 1955. The diet and parasites of Prehistoric Huaca Prieta Indians as determined by dried coprolites. *Proceedings of the Royal Society of Canada*, 1955, June 7, Section V, pp. 51-52.

This is a preliminary note of work which is described more fully in reference No. 11 below.

8 TAYLOR, E. L., 1955. Parasitic helminths in mediaeval remains. *Veterinary Record*, 67 (12), 216-218.

Large numbers of *Trichuris trichiura* and *Ascaris lumbricoides* eggs were found in material of faecal origin from a large pit dated at about 1100 A.D. in Winchester, England. *Dicrocoelium dendriticum* eggs were also found. The eggs may have been of porcine origin although the proportion of *Trichuris* to *Ascaris* is the reverse of that normally found in pigs. However, it is possible that a higher proportion of *Ascaris* eggs had disintegrated. All eggs examined were remarkably well preserved. No strongyle eggs were found, presumably due to the more delicate nature of their shells. Human origin cannot be ruled out and the anomalous occurrence of *D. dendriticum* is discussed.

9 GRZYWIŃSKI, L., 1955. [Parasite eggs in faeces originating from the XI, XII and XIII Centuries.] Jaja pasożytów w kale pochodzącym z XI, XII i XIII wieku. *IV Zjaz du Pol. Tow. Parazytol.*, p. 97. [In Polish]

See No. 12 below.

10 HALBAEK, H., 1959. [Grauballe Man's last meal.] Grauballemandens aidste maltid. *Kuml*, 1958, pp. 83-116. [Da, en]

Examination of the well preserved intestinal contents of Grauballe Man (c. 300 A.D.) and Tollund Man (early Iron Age) from peat deposits in Jutland, Denmark, revealed large numbers of *Trichuris trichiura* eggs.

11 CALLEN, E. O. & CAMERON, T. W. M., 1960. A prehistoric diet revealed in coprolites. *New Scientist*, 8 (190), 35-37, 39-40.

Sodium triphosphate was used to reconstitute a large number of coprolites from a kitchen midden mound at Huaca Prieta on the coast of the Chicama Valley, Peru. Coprolites were taken from a variety of levels corresponding to 3,000 to 500 B.C. and the diet of the inhabitants of the site determined by the examination of the plant and animal remains in the faeces. All coprolites were negative for parasites except one sample (3,000 to 1,200 B.C.) which contained objects resembling ova of *Diphyllobothrium*. The likely worm parasites of pre-Columbian man are briefly considered and it is pointed out that *D. latum*, *D. trinitatis* and *D. urichi* are known to occur in South America at present.

12 GRZYWIŃSKI, L., 1960. Analysis of feces from the Middle Age period. *Zoologica Poloniae*, 10 (3), 195-199. Laboratory of Parasitology, Veterinary Dept., College of Agriculture, Wrocław, Poland.

Samples of 36 preserved faeces of domestic animals from a Slavic settlement of the 11th, 12th and 13th Centuries on an island in the Odra river, Poland, were subjected to physical, chemical and biological analyses. A sedimentation and flotation method using saline and 50% potassium carbonate was used. *Fasciola hepatica* ova were found in 4 samples. No thin shelled ova of *Trichuris* or *Ascaris* were found.

3 WITENBURG, G., 1961. Human parasites in archaeological findings. *Bulletin of the Israel Exploration Society*, 25, 86.

A solution of "Triton" was used to reconstitute coprolites from a cave in Israel near the Dead Sea. The material was dated at about 160 A.D. and contained various protozoan cysts and eggs of *Trichuris trichiura*. This shows that this nematode existed in the Mediterranean area before the discovery of America.

4 GRZYWIŃSKI, L., 1962. [Parasitological analysis of excrement from excavations.] Parazytologiczne analizy Kałow wykopaliskowych. *Wiadomości Parazytologiczne*, 8 (5), 543-548. [Pl, en] Katedra Parazytologii i Chorob Inwazyjnych WSR, Wrocław, Poland.

One hundred and sixty seven samples of preserved faeces of domestic animals from a 10th to 13th Century Slavic settlement on an island in the Odra river, Poland, were examined for parasites. *Fasciola hepatica* ova were found in 7 samples, one of which was from the 2nd half of the 10th Century. Other possible parasite ova could not be identified.

5 JANSEN, Jr., J. & OVER, H. J., 1962. [Finding of parasites in protohistoric material from North-west Germany.] Het voorkomen van parasieten in terpmateriaal uit Noordwest Duitsland. *Tijdschrift voor Diergeneeskunde*, 87 (21), 1377-1379. [Nl, en]

Ova of *Ascaris lumbricoides*, *Trichuris trichiura*, *T. ovis* or *T. globulosa*, *Fasciola hepatica*, *Taenia solium* or *T. saginata* and *Diphyllobothrium latum* were found in material of human origin from a site in North-west Germany occupied from 100 B.C. to 500 A.D. *Toxocara canis* and *Oxyuris equi* ova were also found in material from this site.

6 OVER, H. J. & JANSEN, Jr., J., 1962. [The finding of fascioliasis in the Feddersen Wierde refuge mound from the beginning of our era.] Het voorkomen van fascioliasis rond het begin van onze jaartelling in de omgeving van de 'Feddersen Wierde'. *Tijdschrift voor Diergeneeskunde*, 87 (22), 1440-1441 [Nl, en]

Analysis of material from a 1,800 to 2,000-year-old refuge mound in North-west Germany revealed ova of *Fasciola hepatica* and *Galba truncatula* shells.

16 SPECHT, W., 1964. [An interesting soil sample from a cesspit at the Kunzing Roman fort.] "Eine interessante Erdprobe aus einer Abortgrube im Römerkastell Künzing." *Saalburg-Jahrbuch*, Year 1963/64, No. 21, pp. 90-94. [De]

Numerous ova of *Trichuris trichiura* found in cesspit deposits inside the Roman fort at Vilshofen, Germany, were dated to 140 to 250 A.D. The possibility of rodents and rabbit disturbance of the deposits is discussed, but it is concluded that the soldiers stationed in the fort were probably heavily infected - due possibly to predominant recruitment of agricultural workers who would have been less likely to have developed effective immunity to this parasite at an early age.

17 SAMUELS, R., 1965. Parasitological study of long-dried fecal samples. *Memoirs of the Society of American Archaeology*, 19, -75-179.

A solution of disodium EDTA was used to rehydrate dried human faeces from a prehistoric Indian site at Wetherill Mesa, Colorado, USA. The technique for coprolite examintion is discussed in some detail. Eggs of *Enterobius vermicularis* were detected in one of the 20 specimens examined. Another specimen which had been deposited on a pile of fresh maize tassels contained large numbers of rhabditoid nematodes. These nematodes were not identified but may have been plant-parasitic or more likely free-living forms. Large numbers of mite remains were also found within the faeces.

18 JANSEN, Jr., J. & OVER, H. J., 1966. Observations on helminth infections in a Roman army-camp. *International Congress for Parasitology (1st), Rome, Sept. 21-26, 1964.* Proceedings, Vol. II, p. 791.

Trichuris trichiura and *Ascaris lumbricoides* ova were found in materia- from a Roman fort at Valkenburg-on-Rhine, The Netherlands. The material dated from 42 to ca. 45, ca. 45 to 47 and 70 to ca. 100 A.D. *Oxyuris equi* ova were found in material dated as ca. 45 to 47 A.D. Samples from the same excavations but dating from the Middle Ages revealed ova of *T. trichiura* and *T. ovis* or *T. globulosa*, but no *Ascaris*.

19 PIKE, A. W. & BIDDLE, M., 1966. Parasite eggs in medieval Winchester. *Antiquity*, 40, 293-296.

This is an expanded account of reference No.20 below

20 PIKE, A. W., 1967. The recovery of parasite eggs from ancient cesspit and latrine deposits: and approach to the study of early parasite infections. In: Brothwell, D. & Sandison, A.T., [Editors] , "Diseases in Antiquity." *Springfield, Illinois: Charles C. Thomas*, pp. 184-188.

The literature on this subject is reviewed and details are given of the zince sulphate flotation technique used in examination of soil from a 1,000-year-old cesspit in Winchester, England. Ova of *Ascaris* sp., *Trichuris* sp. and *Dicrocoelium dendriticum* were well preserved and occurred in large numbers. Measurements are given.

DUNN, F. L., 1968. Epidemiological factors: health and disease in Hunter-Gatherers. In: Lee, R. B. & De Vore [Editors], "Man the Hunter." Chicago: Aldine Publishing Co., pp. 221-224.

Among other causes of mortality and disease the incidence and epidemiology of parasitic infection in present-day hunter-gatherer groups is discussed in relation to the diverse ecologies of different groups.

PIKE, A. W., 1968. Recovery of helminth eggs from archaeological excavations, and their possible usefulness in providing evidence for the purpose of an occupation. *Nature, London,* 219 (5151), 303-304.

Soil from a Roman Period site at Owlesbury, near Winchester, England was examined for parasites. Samples were taken from the bottom (4.5 ft.) of a pit on the site from topsoil and from an adjacent field. Ascarid, trichurid or capillarid and *Dicrocoelium* ova were found in the pit samples as well as other unidentified ova. Surface soil contained few objects that resembled helminth ova and only one or two ascarid-like ova were found. Although live free-living soil nematodes were found in the pit samples, demonstrating continuity between recent and ancient strata, the helminth ova found are judged contemporary with other dateable remains in the pit. The lack of more positive identification of the ova made it difficult to decide on the type of animals inhabiting the site.

FRY, G. F. & HALL, H. J., 1969. Parasitological examination of prehistoric human coprolites from Utah. *Utah Academy Proceedings,* 46 (2), 102-105.

One hundred and ninety three coprolites from various sites in Utah, USA, were examined for parasites using 2 rehydration and 2 concentration methods. The trisodium phosphate method proved more satisfactory than the sodium hydroxide method. Formalin-ether concentration proved more satisfactory than zinc sulphate concentration. In Danger Cave, approximately 9% of 67 samples taken from 4 levels corresponding to ca 9500, 8000, 2000 B.C. and 20 A.D. were positive for acanthocephalan ova. All but one specimen contained large numbers of ova. In contrast only 2 (ca. 8000 and 2000 B.C.) of 75 samples from Hogup Cave, and only 2 of 41 samples from Glen Canyon showed infection. The acanthocephalan was probably *Moniliformis clarki* derived from ingestion of insects or rodents. Such infections would probably have considerably infected individual health and had lethal potentialities. 2.6% of all samples contained *Enterobius vermicularis* ova (earliest 8000 B.C.) which probably represents a high actual infestation rate.

FRY, F. G. & MOORE, J. G., 1969. *Enterobius vermicularis:* 10,000-year-old infection. *Science,* 166, 1620.

Ova of *Enterobius vermicularis* were found in human coprolites from Hogup and Danger caves in western Utah, USA. The caves were inhabited from 10,000 B.C. to 1400 A.D. and the oldest coprolite containing *E. vermicularis* was radio-carbon dated as 7837 B.C. This is the earliest known record of this parasite in association with man.

HALL, H. J., 1969. Rehydration and concentration of parasite ova in human coprolites from the Great Basin. University of Utah, USA: mimeographed report.

HEIZER, R. F. & NAPTON, L. K., 1969. Biological and cultural evidence from prehistoric human coprolites. *Science,* 165, 563-568. Dept. of Anthropology, Univ. of California, Berkeley, USA.

This is a useful summary of the considerable amount of work that has been done on coprolite analysis from various Great Basin Indian sites in and around Nevada, USA. There are more than 50 references and indications for future lines of research are given.

MOORE, J. G., FRY, G. F. & ENGLERT, Jr., E., 1969. Thorny-headed worm infection in North American Prehistoric Man. *Science,* 163, 1324-1325.

Examination of probable human coprolites from a pre-Columbian site (ca. 2,000 B.C. to 20 A.D.) at Danger Cave, Utah, USA, was made by immersion in 0.5% aqueous solution of tri-sodium phosphate for 72 hrs. Acanthocephalan ova were found in 4 of 26 specimens examined. It is suggested that *Moniliformis clarki* is probably the species involved. The probable mode of acquisition and pathology of this infection are briefly described.

DUBININA, M. N., 1972. [The nematode *Alfortia edentatus* (Looss 1900) from the intestine of an Upper Pleistocene horse.] *Parazitologiya*, 6 (5), 441-443. [Ru]

Several nematodes were found in the intestine of a horse preserved in the permafrost at Yakutia, Siberia, USSR. The age of the horse is estimated as 32 to 33,000 years. The nematode was identified as *Alfortia edentatus* and appears to be entirely similar to modern forms.

HALL, H.J., 1972. Diet and disease at Clyde's Cavern, Utah, as determined via paleoscatology. *MA thesis, Department of Anthropology, University of Utah, Salt Lake City.*

Twenty human coprolites from Clyde's Cavern, Utah, spanning a 2300 year period, were analyzed for dietary components and evidence of endoparasites. Eighty per cent of the coprolites were assigned to the Fremont occupation (A.D. 400-1200). *Entrobius vermicularis* ova were found in four coprolites. Eggs of what appeared to be Phylum Acanthocephala were found in two coprolites; and Rhabditoid nematode larva occurred in one. Both of these tentative identifications were on material from Fremont levels.

JANSEN, J. & BOERSEMA, J. H., 1972. [Helminth eggs from the latrines of the Olofskapel Gatehouse, Amsterdam.] De wormeieren uit de latrines van het poorthuis. In: "Vondsten onder de Sint Olofshapel." Stadskernonderzoek in Amsterdam. Edition of Institute of Pre- and Protohistory, University of Amsterdam, p. 41. [Nl]

Two samples from the latrines of the Olofskapel in Amsterdam were dated as 1370—1425 and examined for parasites. One sample yielded 150 *Trichuris trichiura* ova per gram and the other 780 *T. trichiura* per gram plus 20 *Ascaris lumbricoides* ova per gram and ova of other unidentified *Trichuris* and *Capillaria*. The rarity of *Taenia* in such material is attributed to the greater fragility of the egg shells. The results are compared with those of other similar investigations.

JARMAN, H.N., LEGGE, A.J. & CHARLES, J.A., 1972. 1. Retrieval of plant remains from archaeological sites by froth flotation. In: Higgs, E.S. [Editor], Papers in Economic prehistory - studies by members and associates of the British Academy Major Research Project in the early history of agriculture. London, UK: Cambridge University Press, pp. 39-48.

A technique for recovering carbonized plant material from soil is described. Soil is fed into a water column through which bubbles are rising to form a froth (Cyanamid Aerofroth 65) which collects the plant particles and carries them over the edge into a surrounding collar which drains into a sieve. A "collector" (paraffin/kerosene) is used to facilitate particle recovery. [This apparatus has since been successfully used to recover plant nematode cysts from archaeological deposits.]

CLARK, A., 1972. Memoirs of the Museum of Anthropology U. of Michigan, No. 4, Ann Arbor. VIII. Notes on some late middle woodland coprolites. In: Fitting, J.E. [Editor], The Schultz Site at Green Point: a stratified occupation in the Saginaw Valley of Michigan. Pp 131-136.

va resembling those of Diphyllobothrium latum were found in coprolites, robably of dog, from Late Middle Woodland (1st to 2nd century AD) de- osits in the Saginaw Valley, Michigan, USA. Other coprolites contained estode ova, possibly of Echinococcus. The possibility of the existence f fish tapeworm and hydatid in man in North America before European ontact is discussed.

ANON., 1973. Study of a 2000 year old body. China Reconstructs, Oct. 1973.

The well preserved body of a middle-aged noblewoman of the Western Han dynasty of China (100 BC) was subjected to a full autopsy. Among many anatomical, histological, pathological and biochemical findings of interest was the finding of Schistosoma ova in the liver and walls of the rectum and ova of Trichuris and Enterobius. This appears to be the earliest record of Enterobius outside the Americas.

ASPÖCK, H., FLAMM, H. & PICHER, O., 1973. [Intestinal parasites in human excrements from prehistoric salt mines of the Hallstatt period (800-350 B.C.).] Darmparasiten in menschlichen Exkrementen aus prähistorischen Salzbergwerken der Hallstatt-Kulture (800-350 v Chr.). *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, Abteilung I Originale, A* 223 (4), 549-558.

Thirteen samples of human excreta from the prehistoric salt mines of Hattstatt and Hallein, Austria, were examined for helminth ova. The deposits were reckoned to be 2,000 to 2,300 years old. In 10 samples, ova of *Trichuris trichiura* alone were found and in another *T. trichiura* and *Ascaris lumbricoides* ova occurred together. Bacteria and protozoa could not be found and may have been destroyed by the salt. Standard methods for the recovery of helminth ova from faeces were not suitable, and best results were obtained by repeated suspension and centrifugation of the samples in *N*/10 NaOH.

ASPÖCK, H., BARTH, F.E., FLAMM, H & PICHER, O., 1973. [Parasitic infections of the gastro-intestinal tract in prehistoric miners of Hallstatt und Hallein, Austria.]. Parasitäre Erkrangungen des Verdauungstraktes bei prähistorischen Bergleuten von Hallstatt und Hallein (Österreich). *Mitt. Anthrrop. Gesellschaft in Wien.* 103, 41-47.

This paper treats the same subject as the preceding one and has excellent photographs, but goes into greater detail on sociological aspects such as the poor hygiene of the population, the route of infection and the living conditions of the miners at that time.

DAVIDSON, I. & CURTIS, G.J., 1973. An Iron Age site on the land of the Plant Breeding Institute, Trumpington. Proceedings of the Cambridge Antiquarian Society, 64, 1-14.

During an investigation of faunal and floral remains from an Iron Age site at Cambridge, England, empty Heterodera cysts were found at a density of 200 cysts/g. of soil. Topsoil in the same area contained 8 cysts/100 g. Most of the cysts were H. avenae but there were some H. schachtii.

ALLISON, M.J., PEZZIA, A., HASEGAWA, I. & GERSZTEN, E., 1974. A case of hookworm infestation in a precolumbian American. American Journal of Physical Anthropology, 41 (1), 103-106.

Examination of the intestine and faeces of a mummy dated 890-950 AD from a gallery burial in coastal southern Peru showed hookworm infection. Examinations of the worms and tissues by scanning electron microscopy enabled a fairly firm identification of Ancylostoma duodenale to be made. This appears to be the first clear record of this parasite in the Americas before known European or African immigration.

ANON., 1974. The fascination of Palaeopathology. Medical World News, 15 (2), 49-53, 56-57.

A popular but interesting account of the current state of palaeopathology.

DUSSEAU, E.M. & PORTER, R.J., 1974. The search for animal parasites in paleofeces from Upper Salts Cave. In: Watson, P.J., [Editor], "Archeology of the Mammoth Cave area." *New York: Academic Press*, p. 59.

Thirteen fecal specimens from Upper Salts Cave, Kentucky, were examined for evidence of parasites; larval nematodes were found in one. It was determined that these were not *Enterobius*, but no positive identification was possible. They may represent a species of the genus *Strongyloides* or a hookworm.

FRY, G.F., 1974. Ovum and parasite examination of Salts Cave human paleofeces. In: Watson, P.J., [Editor], "Archeology of the Mammoth Cave area." *New York: Academic Press*, p. 61.

Eight paleofecal samples from Upper Salts Cave, Kentucky, were examined for evidence of human endoparasites. One sample contained several eggs that closely resemble those of the genus *Ascaris*, and probably indicate infection with the common intestinal roundworm, *Ascaris lumbricoides*.

MOORE, J.G., GRUNDMANN, A.W., HALL, H.J. & FRY, G.F., 1974. Human fluke infection in Glen Canyon at AD 1250. American Journal of Physical Anthropology, 41 (1), 115-118.

An unidentified trematode gg was found in probable human coprolitic material dated 1250-1300 AD from a site at Glen Canyon, Utah, USA.

WEBLEY, D., 1974. An early record of Heterodera humuli Filipjev in the United Kingdom. Nematologica, 20 (2), 262.

Froth flotation of organic debris from the bottom of a filled-in Anglo Saxon well at Elmham, Norfolk, UK, dated as 840 AD ± 150, revealed many cysts of the plant parasitic nematode Heterodera humuli and a few of H. avenae, H. cruciferae, H. rosii, H. galeopsidis and/or H. schachtii. Since hops, the present host of H. humuli, were not introduced until the 16th century it is assumed that the host at that time must have been the common nettle, which was the commonest weed seed present in the deposit.

VERESHCHAGIN, N.K., 1975. (The mammoth from the Shandrin river.) Vestnik Zoologii Kiev 'Naukova Dumka', 2, 81-84.

Nematode larvae, at present unidentified, were found in the stomach of a mammoth (44,000 years old) from the flood plain of the River Shandrin, eastern Siberia, USSR.

WELLS, C. & DALLAS, C., 1976. Romano-British pathology. *Antiquity*, 50, 53-55.

An ellipscidal calcified hydatid cyst (47 x 35 mm) was found in the thoracic cavity of the skeleton of a woman of about 45 from a 1st to 2nd century A.D. site at Orton Longueville, Cambridgeshire, England. Bones of dog, sheep and cattle were also found on the site.

ANDREWS, J.R.H., 1976. The parasitology of the Maori in pre-European times. *New Zealand Medical Journal*, 84 (568), 62-65.

An historical review is given of the parasites of the Maori in pre-European New Zealand. It is difficult to determine whether a species was indigenous or introduced by the Europeans making the identification. Ascaris lumbricoides and Enterobius vermicularis were probably present but Wuchereria bancrofti was probably not, elephantiasis being confused with leprosy. There are no early records of cestode infections in the Maori. Roasted kelp (Laminaria sp.) was chewed by the Maori as a cure for intestinal worms.

Commonwealth Institute of Helminthology

Annotated Bibliographies

nber		Period covered	Number of References	Price
	White tip disease (*Aphelenchoides besseyi*) of rice in Africa and the Tropics	1913-72	150	£3.50
	Helminths in Dogs in Japan	1960-72	89	£2.25
	Nematodes on Soybean (*Glycine max*)	1932-72	184	£4.25
	Oswaldocruzia (Nematoda)	1930-73	29	£1.00
	Transmission of plant viruses by nematodes	1930-73	120	£3.00
	Diorchis	1931-72	46	£1.50
	Plant Nematodes of the Caribbean	1932-73	229	£5.00
	Helminths of Vultures	1930-73	34	£1.00
2	*Meloidogyne* om potato and other *Solanum* spp.	1950-74	74	£2.00
3	Cytology of Helminths	1932-74	413	£7.25
4	*Cysticercus* and *Cysticercus cellulosae*	1930-74	294	£6.00
5	Control of Helminths in Goat	1964-74	69	£2.00
6	Anthelmintic Control of Parasites in Fish	1964-74	62	£2.00
7	Nematodes of Forest Trees	1960-74	156	£3.75
8	Nematodes of *Musa* spp.	1939-74	201	£4.00
0	Helminth Parasites of Rabbits, Hares and Pikas	1930-75	343	£6.50